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The A.V.D. in War Time.

We noted last week the taking prisoner of an Army veterinary surgeon, and we used the fact to illustrate the dangers of the position—a danger that quite disposed of the sneer that we were asking too much in claiming the same "combatant" title as that granted to medical officers. This week a correspondent supplies some information that makes our claim stronger than ever. Under the Geneva convention a veterinary officer is treated as a combatant and is made subject to exactly the same rules as apply to the fighting line. The medical officer is protected in time of war, the veterinary officer is not. In times of peace no special danger to either exists. And yet the War Office grants an unqualified military title to the medical officer but refuses it to the veterinary. Such a gross anomaly cannot long exist in a country where common sense prevails. The capture of Vet.-Lieut. Shore is an object lesson that cannot be overlooked.

Panic among Animals.

The stampede of the mules at Ladysmith is an event which brings into prominence the peculiarities of animals. It has caused one of the most sensational episodes in the present war—the loss of a fine body of troops and the most unjust strictures upon a brave General placed in a position than which none could be more critical.

Judging from what we know of animals in ordinary every-day life, the wonder is that these stampedes are not more common. Every horseman knows how easily some horses take fright and how when one loses his head all the others associated with him follow suit. One run-a-way horse in a team is enough to start the other three, even if they be old stagers. Mules are worse than horses, and when we bear in mind how these animals are purchased in a hurry how easily an extra nervous or vicious animal gains admission to a team, it is remarkable that more accidents resulting in a serious panic are not heard of. The mad fright of animals, alarmed by some extraordinary event occurring on an unknown road at midnight, is calculated to cause confusion and panic to an extent we peaceful folk cannot appreciate. Those of us who have seen horses escape from a building on fire know how impossible it is to control them. About two years ago some twenty horses were with difficulty released from a burning stable, and many were not recovered for days, whilst some ran headlong into passing vehicles and died in the streets.

That mules should stampede when struck by falling rocks and by rifle bullets in the dead of night is not extraordinary—it is just what one might expect. The awful confusion which must result from such an accident can only be imagined, and the soldiers who suffered deserve the sincerest sympathy of the whole Nation. What great events on small depend!

CEREBRITIS?

Writers state that cases of the above are rare, and can only be verified by post-mortem examination; others say that it is indistinguishable in the symptoms from meningitis. The following case may prove of interest.

On June 20th I received a message asking me to see a cart-horse, a powerful animal about 16·2, eight years of age.

History.—The day previous the horse had been used with another to assist in removing a heavy traction engine. He did his work as willingly as usual, but on returning to the stable refused his food and became very excited, pawing the ground with the fore feet and kept raising the hind limbs spasmodically as in stringhalt.

Symptoms.—As the case was some distance from home, some time elapsed before I saw him, (7 p.m.) On arrival I found the patient in a semi-comatose state; pulse 24 and full, temperature 105°, breathing irregular and stertorous, complete amaurosis. He attempted to eat, had full movements of the jaws, but experienced great difficulty in swallowing. The head was carried low, almost between the fore limbs, and constantly swayed from side to side. At intervals became excited, when he would rush forward and press his head against the wall.

Diagnosis.—Inflammation of the brain or its membranes.

Treatment.—The bowels being somewhat constipated, an oleaginous purgative was given, ordered constant cold applications to poll, and strict quiet enjoined. At 9 p.m. he became very excited and kept circling the box, occasionally laying hold of the manger with his teeth or pressing his head against the box.

At 11 p.m. a draught composed of pot. brom. and extract belladonna was given, and he gradually became quieter and shortly afterwards fell down, where he lay breathing heavily. On leaving him at midnight he was in a comatose condition, pulse 32, and temperature 104·6. I left a similar draught and instructions to continue the cold applications.

A messenger reported in the morning that at 3 a.m. he began to struggle again, and after several attempts regained his feet and began walking round and round the box, and would collide with any object that came in his way. The draught was given, and about four o'clock he became quiet, and the breathing less stertorous.

June 21st. On seeing him at 9 a.m. I found he had apparently taken a turn for the better; temperature 102 4, pulse 36, breathing quieter and more

regular. The blindness had passed off and he ate a little hay greedily.

At mid-day the owner reported progress. The horse had defæcated freely, and partaken of more hay and water. He was now quiet, although occasionally would sway his head to and fro.

By the 23rd the temperature was normal, the pulse remaining about the same. He was however, very weak, and showed muscular twitchings. I continued the bromide in small doses in conjunction with ferri sulph. and gentian. By the 26th the owner reported the horse much stronger. The improvement was maintained, and within the fortnight he was at his usual work, and since then there has been no recurrence of the symptoms.

W. G. G.

A DEFERRED FRACTURE.

The fracture of an important bone that only becomes evident some days after the violence which caused it is an interesting surgical event, but it is a very undesirable thing in practice I have met with three or four of these cases previously, but they were all of the *tibia*. The first of these so impressed itself on my mind that ever since I have looked suspiciously upon all blows or kicks affecting the inner surface of the tibia. It is, to put it mildly, very awkward to treat a slight case of lameness as a trivial and negligeable matter—to find in a few days that it is an incurable condition implying the loss of the horse.

It is easy to be wise after the fact. The biggest dunce can explain why a horse loses a race or a general a battle—the day after the event. It is easier to explain how a deferred fracture occurred than to anticipate its occurrence, and it is difficult to avoid a charge of negligence by critics who never err. Undeterred by these reflections I must narrate a case which recently caused me some regret and which may be a useful warning to others.

The patient was a big chestnut dray horse, that had suffered for some time from a sandcrack in the near hind toe. He worked regularly, but every month or two went lame from the sandcrack. Readjustment of the shoe and a few days rest was all that was required, and the horse resumed work. When my attention was called to his last lameness I casually suggested a visit to the farrier and a rest. I noticed he was slightly lame on the near fore limb as well as the hind, but on the horse-keeper saying—"Yes, he got loose last night and perhaps another horse tapped him." I troubled no more about that.

I saw the horse again two days later and he was nearly sound behind. When walked up the yard he was just sufficiently stiff on the foreleg to make it worth while giving a day or two more rest.

Three days later I was sent for, as the chestnut horse was very lame. He had been placed in a loose-box the previous day to make room in the stable for a working horse. I found him in the box unable to bear the slightest weight on the fore foot. Deformity of the arm and the pendulous condition of the leg below the deformity showed clearly the nature of the case and the horse was immediately killed.

Post-mortem examination of the bone disclosed a complete transverse fracture. The form of the fractured ends probably indicate the reason why displacement only occurred six days after the injury. Each end was denticulated and the prominences of one fitted exactly into the depressions of the other.

If I had suspected a fracture at first I could have done nothing to prevent its displacement. Slings and bandages might perhaps have done some good, but were not likely to have effected a cure of commercial value. Even though I may not have failed to save a horse, I cannot avoid my client's knowledge that I did not detect a fractured bone until six days had passed and it was evident to anyone.

W. H.

CASE OF BRYONY POISONING.

By A. S. Auger, M.R.C.V.S.

I think the following few particulars may be of interest to some of your many readers, as I am unable to find any literature bearing upon the subject.

On Friday, the 16th of September, I was requested by Mr. Geo. Pettit (the noted breeder of the short black pigs) to attend to his horses, several of which were unwell. I immediately repaired to his place and found that of 13 chestnut horses, which were in an open yard, seven were affected. The symptoms in six of them were general stiffness with peculiar gait resembling that of laminitis, but upon examination there was no throbbing of the plantar artery, the stiffness seemed to be more particularly affecting the muscles of the loins, as was more particularly to be observed in the case of the seventh, a nine-year-old mare, which I found laid out full length just as a case of laminitis would do. When made to get up, she sat upon her buttocks, and so stiff were her loins that her fore feet were poised in the air for a minute or more as she tried to grip the ground. When standing she was like a semi-paralyzed animal, pulse 84, temperature slightly elevated, no particular injection of the visible mucous membrane, appetite good. In the other six cases the pulse was normal, as also was the temperature. Urine clear and voided without any marked difficulty, appetite good in each case.

After very close questioning I elicited the fact that there had been a cleaning up of the garden, round which a considerable quantity of the *Bryonia divica* had grown, the rubbish was thrown into the horse-yard on the Wednesday afternoon, the horses were seen to eat of it, and were taken ill whilst at plough on the following day. Mr. Pettit ordered them home and gave bran mashes and a dose of physic to each of the 13. They appeared under the influence of this physic which I visited them on the Friday, I applied mustard and embrocation to the loins, and administered diuretic medicine. They were soon at work

except the mare, but are very faint and easily tired out, and in the case of the mare I have applied a cantharidine blister with beneficial results, but she does not seem anything like in working order yet.

VETERINARY SOCIETIES.

NATIONAL VETERINARY ASSOCIATION.

MILK FEVER IN COWS.

By F. T. HARVEY, F.R.C.V.S., St Columb

DISCUSSION.

(*Concluded from page 247.*)

Mr. H. THOMPSON wrote: Frequently I have asked myself the question—Is the so-called milk fever in the cow a disease? so often have I had cases "go down," become comatose and finally recover without any medical treatment whatever—merely good nursing and keeping in a good position. I therefore look upon it as a functional derangement of the udder in the first part, but, if resolution does not set in soon disease results. I see Mr. Harvey has referred to this on page 19, in italics.

Since the article published in *The Veterinary Record*, January 1st, 1898, by "G. M." on the "Cause and Treatment of Milk Fever," by J. Schmidt, a large correspondence has been carried on by various writers. Now with all due respect to Schmidt and others, I think I may claim the credit of being the first to call attention to the cause of parturient apoplexy commencing in the udder, for in January, 1877, I wrote an article to this effect which was published in an agricultural paper on February 1st, 1879, I was then, and am still of the opinion that milk fever is due to the following:

1st. Too easy expulsion of the waters and fœtus, associated with a want of tone in the walls of the uterus to contract. (Collapse).

2nd. The removal of the calf from the mother, thus depriving her of the pleasure and excitement of licking and cleaning her offspring with her tongue. (Inducing nervous prostration).

3rd. The too sudden withdrawal of all the milk from the udder at once immediately the cow calves: this sudden removal of the pressure causing paralysis, as it were, of the milk-producing cells and a retention of the agents or matters that enter into the composition of the colostrum, and which ought to be eliminated by the action of the udder, but owing to the loss of function and failure to re-act on the part of the milk cells no milk is secreted, yet the absorbent vessels of the gland seem to be very active, and thus the colostrum elements are taken into the system producing a toxic effect, which effect varies very considerably according to the nervous temperament of the animal, age, and conditions under which it lives. This I look upon as the exciting cause: too sudden removal of all the milk.

Be this as it may, when I read the article on Schmidt's treatment by G M. in *The Record* I jumped at the idea at once and said "this is as it should be," and wondered why it had not been seen before. I straightway adopted the treatment by dissolving 2 drachms of iodide of potassium in one quart of water previously boiled and allowed to cool down to 100 F., injecting half-a-pint of the solution into each quarter of the udder, my first instrument being an ordinary teat syphon fixed into the end of a rubber enema syringe.

Boracic acid, two drachms dissolved in one quart of boiling water, and allowed to cool to 100 deg. F., acts equally as well, and so does my old favourite agent chloride of sodium, four drachms dissolved in a similar quantity of water and temperature. I have not yet tried warm water alone, but will do so. My experience and opinion is that the material, injected into the teats, acts as a stimulant to the milk cells and re-establishes their action and the secretion of milk, as all the cases that have recovered—about 88 per cent.—have had the quarters fairly well filled with milk from about four to eight hours after irrigation. I allow only small quantities of the milk to be removed from the gland about every six hours for the first five days. The patients are generally on their legs in about 10 to 20 hours. If at first there is great excitement; animal tossing and tumbling about, and the temperature up to 104 deg. or 105 deg.—the spasmodic form as Mr. Harvey puts it—the cases are, I think, more of an eclampsic form, for which I find the chloral treatment answers very well, in connection with the injection of the udder; the animal is put into position, on the sternum, and supported with bundles of straw, &c., and kept as quiet as possible; no hand-rubbing of the udder after the irrigation. I have very rarely to repeat the operation except in very old cows and big milkers, in which cases the mammary gland seems to be completely paralysed, and the injections fail to rouse it into action. Have had only two quarters slightly congested from the effects of the irrigation.

About two or three days after the operation diarrhœa set in, even when no purgative is given.

Mr. CHAS. PARSONS (Launceston): It seems to me sir, that of late years the treatment of miik fever has resolved itself into two parts: treatment by chloral hydrate and treatment by stimulants, I cannot believe, that the two can be right, although a combination of the two may be right. The chloral treatment may be correct or the treatment by stimulants correct, but I fail to see that both can be right of themselves. I have treated some cases with the pot. iodide method, and I must say that I am highly impressed with it. During the past winter and spring I have assisted Mr. Penhale, of Barnstaple, and the treatment with the pot. iodide injection was highly successful. The stimulants we used were nitrous ether and whisky—and, needless to say, I always prescribed the best Irish. Recently I have treated some cases with chloral hydrate and the potassium iodide injection, and I am bound to say that I fail to see that the chloral hydrate makes very much difference. What I regard as the essential thing is to give the pot. iodide injection, evacuate the contents of the rectum and bladder, and pay due attention to the position of the animal. Then I believe you will have excellent results. As to the prevention of milk fever, I do not believe very much in it. There are men here who have far greater experience than I have on the subject. I do not, however, believe that purgatives make very much difference. Of course, we like to believe that they do some good. Some men have special remedies for special things. It would be considered presumption, perhaps, on my part to advise on methods of treatment ("No, no"), but I say inject the udder, pay due attention to the position of the animal, and evacuate the contents of the bladder and rectum, and I believe you will be able to say, as I can, that the treatment of milk fever is highly successful. I will just quote some cases. Within the last eight weeks I have treated some seven cases of milk fever, and the whole of them recovered. One of the cows succumbed to inflammation of the lungs on the twelfth day, and another died from red water on the eleventh day. The first case I believe I am to blame for. I gave the animal some medicine, which went the wrong way, and that I believe set up inflammation of the lungs. I think there was something like 75 per cent. of recoveries. I must say I am very highly impressed with the pot. iodide injection. When I first started it

I was almost as sceptical as Professor Macqueen, but I have changed of late. In conclusion, I should like to add my testimony to the very valuable paper we have had from Mr. Harvey.

Mr. D. J. DAVIES (Swansea): I would just like to say a few words about the cause of this troublesome disease. I will not venture any opinion as to treatment, because to my mind it is very much like putting the cart before the horse until we know the exact cause. In my own mind I am almost satisfied that the disease arises from the stomach and bowels, and I may be allowed to give you an instance where a friend of mine experimented. Having this idea, he secured the contents of the rumen from the cow suffering from this disease, and afterwards injected the same into a healthy cow, with the result that he had symptoms resembling very much those of milk fever. It is but a solitary instance, and he has not gone any further in the matter, but I thought I would mention it in order that any practitioner or our friends from the colleges might take the matter up. I take it that the ordinary practitioner cannot carry out these experiments for want of a licence. It is I believe, well worth the trouble of making further experiments in this direction. Failing that, I do not see why the contents of the udder should not be secured and tried in the same way, and thus help us a little further in the direction of finding out the real cause. I have listened to the speakers who have preceded me, and I may say that almost without exception they have conveyed to my mind that the disease arises from the stomach. I put it this way. The disease rarely occurs in young animals; is it not therefore possible that the high feeding and forcing of cows for milking purposes is the cause of weakness in the digestive tract produced in the course of two or three years? I look upon it almost as a predisposing cause, this weakness of the digestive tract. Mr. Penhale mentioned something about an attack of milk fever always following the turning of a cow out to fresh grass. I think Mr. Thompson in his letter also referred to certain pastures. That again is probably due to some digestive disturbance. There is another matter that I would like to draw the attention of the members to, and that is with reference to the trochar and canula when introduced into cows suffering from milk fever, I have frequently observed that it stains very black indeed. I am aware of the fact that you get staining in ordinary tympanitis, but in this particular instance it is very well marked. I mention that as another thing which conveys to my mind that there is some disturbance in the stomach to cause this. With reference to treatment, I have heard a great many people praise this injection of iodide of potassium and others state that they have had successful results with chloral. But they invariably tell me that they attribute their success in the treatment by chloral to its sedative effect. I would venture the opinion that it is not so much the sedative effect of the chloral as its antiseptic property. I will leave the question of treatment. I have heard a good deal about it, but I think we might very well leave that and devote our energies to finding out the cause. Then I think the rest will follow.

Mr. KING: Mr. President, I think the compliment paid by Prof. Macqueen to my old friend Mr. Harvey has been the most deserved one of this meeting. I should not like to leave this room—although I have not given the attention to the paper which it deserves—without also paying my old friend my tribute of congratulation upon his thorough and exhaustive paper. I believe that this is a disease which is almost altogether preventable, and I say so advisedly, for I have given the preventive treatment a very satisfactory and thorough trial. When I first came to the practice we have now there was a very large herd of cows in which milk fever was constantly occurring. The gentleman who owned these cows paid my predecessor some very large accounts for treatment of these cows alone. He came to me and said: "You are starting and I should like to know if we cannot do something." I suggested to him an alteration in the feeding of his cows before and after calving, giving them a simple saline purgative before and treacle and a small drink containing some belladonna afterwards, and I may say that since this treatment has been carried out there has not been a single case of milk fever. One cow has been lost, as by some means she got out the day after she calved, filled her stomach with bulky food, and went down. Now, I consider that the filling of the stomach with bulky food has a great deal to do with this disease. It you put bulky food which easily ferments into the stomach of the animal, if the function of digestion is not going on as satisfactorily as it ought to do, you get this food fermenting and it destroys the equilibrium of the system, and then down goes your cow. I think if you give food of an easily digestible nature you will do away to a great extent with milk fever. When the chloral treatment first came in I had the most satisfactory results. I have a record of about 28 or 30 cases, and I believe I got about 21 of them up. I said to myself, "We have a real good thing here," and I set about preparing special drinks and all the rest of it. Directly I got these special drinks out, the luck turned, and every case died. That has been my experience pretty well ever since. I have not the slightest confidence in the iodide treatment. I think that after a time it will be found that the luck will turn again. We shall get just as bad results from that as from the chloral. I believe the success met with in the chloral treatment was due to the explanation offered by my friend on the left, that is, to its antiseptic properties. I do not know whether this is right, but probably some free chlorine was thrown out which stopped the fermentation in the stomach. I have noticed that if you get a cow with acute tympanitis she invariably dies. I have never seen a cow down with acute tympanitis but what she died. I have found that the great bugbear in the treatment of milk fever is the after effects left by the congested condition of the muscles of the thighs, and it often proceeds to gangrene. You get your cow round and feeding, and think that everything is going on satisfactorily, but somehow she does not get up. I have had a good many cases, but I have been always unfortunate with them.

There is just one more point that occurs to me before I sit down. In the district in which I formerly lived there was a very large cow market to which dealers from London came to buy and sell. I have noticed that calving cows or cows that had just calved coming from that market never failed. Cows going from that market never had milk fever. I think the explanation of that is that the cow on the farm lives a lethargic sort of life. You get her away from that and excite her, and it has some influence on the system which just stops the disease.

Mr. SAMSON: I also thank Mr. Harvey for his very good and exhaustive paper. He has certainly told us all we know about milk fever at the present day. If we persevere and peg away we shall perhaps find out the true pathology of this very fatal complaint. I myself am inclined to think that milk fever is some peculiar, poisonous condition of the system produced wholly and solely by stimulating and unnatural food. We do not get it in the first calving, and very very seldom get it at the second. Then at the third calving we do get it, and afterwards the animals become more prone to an attack. I think the reason is that as they get older they get more stimulating food into the system. The way cows are kept now by dairymen and farmers is quite unnatural, to my mind. I have tried most every kind of treatment, barring the injection treatment. My greatest success has been with the chloral treatment, which is certainly very simple and easy. Give an ounce of chloral and leave a half ounce to be given half an hour later—then

go about your business, and the cow will do as well as she will in any other way. I have had very great success in the way of prevention by getting cows off the grass six weeks before calving. They should be put in a bare pasture with a boy to drive them about three or four times a day. You cannot starve a cow at that time of life, and by giving her a little hay and plenty of water it will prevent her dropping. Another very good preventive plan I have found when called in late ; if the animal is very fat and there is no time to reduce her, is to bleed and purge her well. Even strip the udder three days before and continue to strip it right up to calving, and you won't get one in fifty drop—that is my experience. I have never had any good result from slinging. Gas forms in the rumen and they become tympanitic. My experience is that cows, when once down, if they do not get up in 12 hours, do no good at all. They get pneumonia, or bed sores, or perhaps after a week you find that they are paralysed and have to be killed.

Mr. GOLLEDGE : When I was a boy at home in Wiltshire my father was in the habit of calving every year 100 or 120 cows. They were usually let out in the winter time, and those tied up were fed on rough hay. Speaking from my experience during the time that I was at home and since, and from my experience of our neighbours—it was a dairy district—I can say that milk fever was a thing very little heard of. Cows calved in spring and not kept in any artificial conditions are rarely subject to milk fever, although they may be of a good milking strain. I particularly refer to shorthorns. As to what has been said about sulphate of magnesia I can endorse most people in that. I look upon an animal that shows symptoms of milk fever and gets a pound of sulphate of magnesia down her to be of very little use to a veterinary surgeon. I do not believe in bleeding. A good deal has been said about butter fat. I cannot help asking myself the question, Why do we not see more milk fever among cattle that are used so much for show purposes ? I have not had much experience among show cattle, but I have had some. Milk fever I think is not common among those cattle, and I particularly refer to shorthorns. Although there are 40 or 50 score they calve down and do not get milk fever. They do not give much milk, and there is generally a foster mother to rear the calf. You have the animal at the same time in a high state of plethora ; you have the animal well fed with plenty of good stuff, and yet it is not so much subject to milk fever as cows kept in a leaner condition and calved in the fall. A good deal has been said about indigestion, but I do not believe much in that. I was rather struck in reading a pamphlet sent out by the Jersey Herd Society and reading through the different opinions given by practical men. Questions were asked by those who went in for breeding Jerseys as to the methods adopted for preventing and curing milk fever. To my surprise I found that a good many were urging the administration of a certain quantity of oil cake. They found the animals received no harm from it It seems to me a curious thing to do, but good results seem to have been obtained. One or two remarks have been made with regard to fermentation and that sort of thing taking place and giving rise to milk fever. I cannot see that. One sees any amount of cases of fermentation, and, as a rule, there is evolution of gas, and I should expect to see tympanitis, and tympanitis is not a thing to see when an animal is off its legs with milk fever. I do not think we can look to that. If so, why do not we get it in young cows or in the first or second calving, and why not in middle age, for then the digestive organs get weaker, and they are more than likely to suffer from fermentation ? I find there is always a fall of temperature as one of the first things when the secretion of milk is arrested. When I was at College, Professor Simonds used to say that a cow would often drop with hay in its mouth ; she simply makes a noise and down she goes. I do not think there is very much wrong with the digestive tract. I think that must be in a pretty good working condition. As a preventive I do not believe in milking cows before they calve or much afterwards for the first three days. Schmidt's treatment I have tried with a certain amount of success, but I have simply used it pure as directed by him. I have not tried water, but probably that would act just as well. I have not tried Chinosol.

Principal WILLIAMS : I wish you to remember one thing, that here we have what is almost a new theory brought before us, that is, the formation of some ptomaine in the mammary gland. I want you to look back and read the literature about the commencement of veterinary science from 70 to 100 years ago, and you will find this disease described by Continental writers as blood disease under the term vitullary fever. Allow me to pay a compliment to one who is dead and gone. I had the privilege of being a student under Professor Gamgee for one session at the Dick College, and I may say that had Gamgee lived in the profession he certainly would have been its brightest ornament. I wish to pay this compliment to him, the compliment of a student to a man whose memory he reveres. He described this disease as a blood disease, and it is often described in the Continental writings at the commencement of this century as a blood disease. Therefore we must not run away with the idea that we are dealing with an unknown theory. The treatment based upon that theory has been put to the test, and according to all experience it is no better than any other treatment. My idea, which I have written about, is that it is a form of indigestion, that the predisposition to this indigestion is brought about by weakening of the digestive apparatus in deep milkers. As time goes on the digestive organs weaken and are debilitated. The excitement of parturition comes on, certain changes take place—perhaps the formation of some deleterious material—and the absorption of that material into the system.

Mr. POLLOCK : After what has been said on this subject, very little remains for me to add. I am sure the essayist feels at this moment repaid by the kindly acceptance we have given to the great labour he has bestowed on the preparation of his paper.

One of the speakers to-day seemed to class septic metritis, milk fever, and gastric apoplexy as one and the same disease. I have had in my practice, more than once, all three cases at the same time. I have had gastric apoplexy when the rumen was distended, preceded by symptoms of colicky pain, and very soon afterwards the animal was down, presenting all the symptoms which we have in milk fever. Those cases are more frequently found in the summer season when the grass is of a luxuriant character. At the same time, I have had that condition known as septic metritis, in which the animal presents, in a large measure, the symptoms which we have heard described as milk fever, the only difference being that we have discharge coming from the vagina with a fœtid odour, and that coma increases as the septic matter is absorbed. Then we have this other disease which has been classed as milk fever. I do not know exactly why it has obtained this name. I, for one, would prefer it drooped out of our vocabulary, because it seems to give no clue to its pathology. In my experience the temperature is not in all cases such as we would be warranted in saying it is really an extremely febrile condition. I find that the temperature falls when the membranes are of a flabby character. The season of the year, too, has something to do with it ; if a case occurs in my practice when the weather is dull and heavy, and the atmosphere thundery, with low barometrical pressure, I find my case does much worse than when the air is clear and balmy. When testing the temperature of the milk I do not find it greater than under natural conditions. Therefore I think milk fever is not quite the proper term. It has been classed as a

disease arising from domestication. Unquestionably this is true. I have found it always in animals of high condition and in the season when the grass has been very good and rich. Where the pasture has been poor and the animals have had to exercise themselves in walking over a large range of field for food, I find this exercise so strengthens the muscular tissue and the system that it has warded off an attack. I have found in practice that if I had a case to attend when the stomach was distended with food my prognosis was unfavourable. On the other hand, if I could get my case with a light stomach, containing apparently little food, it invariably did well. I feel sure, looking at it from that standpoint, that a full stomach means a bad case, and an empty stomach a good one. There is a wide field for work in connection with preventive remedies. In my practice my orders are: Take the animals from the rich pasture three or four weeks at least prior to calving, put them into a field that is practically bare, give them straw and water, and plenty of exercise; this is practically the only measure that is necessary to ward off an attack. To-day we have had put before us the udder as a source of the mischief. That I cannot understand. I verily believe that a large proportion of cases we have to-day is brought about by septic matter entering into the system. If we look to the digestive system to add strength to the body at that particular period matters will go on better with us.

Mr. F. T. Harvey, in reply, said: I must thank you, Mr. President and Gentlemen, for the very cordial way you have received this paper, and I hope from the discussion which has ensued our knowledge of this disease will be increased. Mr. Penhale alluded to what was said in reference to the retention of the after birth in milk fever, and quoted the remark of the late Professor Walley. I think he mistook Professor Walley. What he meant was that if the membranes were retained you could get milk fever. It is perfectly clear that you get milk fever but rarely if the uterus contains septic matter which enters the blood stream, and you get fever and a kind of metritis. That also is an intoxication, but, as I pointed ont, what is absorbed from the uterus is a result of bacterial agency, and what is absorbed from the mammary gland is not a bacterial product, but produced through some activity or error in the mammary gland. Mr. Penhale also alluded to roots as a very common cause. I do not care what the animal is having so much, if it is having it irregularly, if there are errors in management taking place at the time. It is less what the animal is having than how it is given the food. If that were not so, diet would be of no use as a preventive. He alluded to regurgitation, and he was rather doubtful about the so-called drenching pneumonia. That does exist, but I have not met with it very often. I believe in drenching you do get sudden death; that death is not always due to the amount of medicine that enters the trachæa and the lungs, but due to some spasm of the glottis or something that produces a great effect. In fact, in drenching animals with hoose you sometimes get that sudden death also. He then makes some remarks in reference to the colostrum. I think that if it was the colostrum we should see milk fever more than we do. But still that is a point we do not know very much about, and we shall never be certain that it is a toxin until it is isolated, and that will require Professor Mettam or some Histo-chemist to work in order to see whether there is anything there or not. On the question of poisoning, Mr. Davies alludes to the effect of poisons resulting from injection of stuff into the stomach. I should think that is probably what would happen. I have pointed out in the paper that there are substances formed there, and if they get into the blood they will produce a disease which in many cases is indistinguishable from milk fever in regard to symptoms.

I am obliged to Professor Mettam for relieving me from discussing the nature of the disease, and I hope in a few years our knowledge will have increased. One gentleman spoke of Professor Axe mentioning the udder. That was spoken of and has been, as Professor Williams said, right down the century. Many writers have alluded to some form of poison, but until recently they had not chosen the udder as the centre for its manufacture. In that way the ideas introduced by Schmidt have been somewhat new, but I quite think that if the same kind of poison was formed in some other way, no matter by which channel it entered the blood stream, or the mode of entrance, the symptoms would be very much the same. Mr. Parsons said he did not see that stimulants or sedatives could be rightly given at once. My idea of the action of stimulants and sedatives is that they simply control the nervous system and equalise the circulation throughout the body, and if the coma is very profound and the failure of heart action taking place, I think it is quite justifiable to give stimulants. If, on the other hand, the spasms are strong, you should give chloral. I will not detain you any longer, more than to say that I think that one point is that in adopting one system of treatment you rather neglect the other. I think we shall never get milk fever properly managed until we look to the general system as well as trying to look for the poison at the point of origin. I think we should deal with them both.

OÖPHORECTOMY OR OVARIOTOMY OF CATTLE.

By Fredk. Hobday, F.R.C.V.S.

Abstract of paper read before the Plymouth meeting.

Mr. President and Gentlemen,

I had at first intended to take as the subject of my paper the "Surgery of the Uterus and Ovaries of the Domesticated Animals," but I found that the subject was such a vast one that I thought it would be much the better plan to confine myself to the title above mentioned.

The operation of oöphorectomy or ovariotomy (depending upon whether the ovaries are healthy or diseased) is commonly known as "spaying," and is still performed in some parts of the British Isles on calves and heifers. It has been applied at spasmodic intervals (especially during the present century) to dairy cows, but no statistics which have before been collected can compere with the recently published results obtained by the persevering efforts of M. Flocard, a veterinary surgeon, of Geneva.

This gentleman informed me in a letter received early in June last that up to May 31st, 1899, he had, during the past 22 years, performed the operation on no less than 5,079 animals. Amongst the first 2,000 there were about one half per cent. of fatal accidents and a further 5 per cent. of minor complications, such as abscess, peritonitis, and return of nymphomania. During the last 3000 there have been no mortalities, and only 4 or 5 per cent. of secondary accidents of minor importance.

This brilliant result M. Flocard ascribes to application of antiseptic precautions as far as is possible, and an improved instrument and method of operating

At the latter end of October last a large dairy owner in Kent, Mr. Kirby, of Ashford, having several times read about M. Flocard's operation, obtained the services of that gentleman from Geneva to come to England and spay 42 of his herd of milking cows. It was about a fortnight before this that I had operated upon my first case, and, being especially interested in the subject, I obtained permission from Mr. Kirby to from time to time visit his herd and personally watch the results. Since that time I have operated altogether upon 14

cases in different parts of the country (*Journal of Comparative Pathology and Therapeutics*, June, 1899), I am thus able, with the 42 cases operated upon by M. Flocard, to offer for the consideration of this meeting a summary (so far as the time which has elapsed will enable an opinion to be given) of the results of 56 consecutive oöphorectomies recently performed upon milking cows in England.

The benefits claimed for the operation are :—

(1) That animals which are being prepared for the butcher are fattened in a much shorter time without increase in the quantity or quality of the food.

(2) That the flesh is much better in quality than that of the cow which has not been spayed (the flesh of the spayed cow even when old is said to be as palatable as that of the steer).

(3) That the yield of actual meat is about 6 per cent. greater.

(4) In milking cows the most noteworthy results are said to be shewn upon the milk yield ; the duration of lactation is prolonged for an average of from 20 to 24 months if the animal is operated upon about 40 or 45 days after calving, and the daily amount given averages almost as much as at the time of operation. The cow also fattens at the same time, so that when the milk yield falls to below a paying quantity the animal is quite ready for the butcher without any extra diet.

Of course, all cows will not give milk continuously for this period, some may lose their milk at the end of 12 months, whilst on the other hand M. Flocard can quote one instance in which a cow after being spayed milked continuously for seven, another for six years, and several for five years.

That this prolonged period of lactation may occasionally occur even in a cow which has not been spayed is borne out by an animal at the present time in the possession of Mr. Garrett Taylor, of Trowse, Norwich. This cow, born in 1884, produced her first calf in 1887, and her third calf on the 11th of May, 1890. The circumstances attending the birth of this calf were such that it was deemed doubtful whether she would again breed, and the order was given to fatten her as soon as she was dry. In the Milk Record for 1898 (published March, 1899) the name of the cow is still present as having given during the (ninth) year a total of 3540¾ lbs.

In spayed cows it is also claimed that the milk becomes richer in quality for cream and butter making, and that the absence of œstrum gives a greater aggregate amount at the end of the year, the supply being much more uniform and steady.

In *The Veterinarian*, for 1834 (p. 569) there is an account stating how a correspondent of the *United States Southern Agriculturist*, whilst spending a summer at an hotel kept by Mr. Thos. Winn, of Natchez, observed two unusually fine cows always tied up in a byre. Upon admiring their fine condition, Mr. Winn informed him that they were of the ordinary common breed of the country, but that they had been spayed and were then in their third consecutive year of lactation. Mr. Winn stated that he had noticed in English magazines that the prizes in ploughing matches in the southern counties of England always went to spayed heifers, and it occurred to him to test the result of the operation on lactation. He had four cows done at different times, each having given milk continuously for several years.

In *The Veterinarian* for 1835 (p. 629), there is an extract from the *Recueil* giving details of the operation performed by M. Regène, a veterinary surgeon of Bordeaux. One animal died four months later of symptoms resembling generalised tuberculosis, and the other four (when reported upon 19 months after the operation) were still giving the same amount of milk as at time of spaying. Two of them had since been in œstrum. The author concludes with the words, "This amount, on a fair calculation of the gradual diminution of the secretion, is double the amount that would otherwise have been obtained in the whole period."

In the *Recueil de Med. et Vet.* 1850 (*Veterinarian*, April, 1851, page 219) M. Roche Lubin gives a summary of eight cases. One died on the fifth day after, no post-mortem being made and no reason assigned. All the others fattened rapidly, but the period of lactation was not prolonged.

The conclusions drawn by this operator were of a directly negative character to those of others, viz.,

(1) That spaying is not always attended with abundant and constant secretion of milk.

(2) That it does not cause the milk to become of superior quality.

(3) The only advantage is the great disposition to get fat and this renders the meat more juicy.

(4) That this obesity, as soon as it has reached a certain point, causes a spayed cow to become dry.

(5) That the risk of spaying (the flank incision was used) exceeds that of calving.

Up to this period the operation had always been done by the flank incision, and to this, together with the fact of the use of antiseptics not having been understood, must be attributed a great deal of the danger which existed of untoward sequelæ.

To M. Charlier must be attributed the credit of introducing the vaginal method of operating, a method which gives infinitely greater safety than that of the flank. The idea came to him one day after accidentally lacerating the vagina of a cow whilst examining the animal to see if she was in calf, and he performed 200 operations without any mishap.

In 1889 Dr. Ostertag reported (*Journal of Comparative Pathology and Therapeutics*. 1889—Abstract from *Monatshefte für Praktische Thierheilkunde*), nine months after operating, the results of 12 oöphorectomies which appear to have been very satisfactory up to that time, both as regards the supply of milk and the general condition of the animals.

On several occasions during the past few years papers on the subject have been introduced before the Central Veterinary Medical Society of Paris, one dealing with 117 and another with more than 50, successful oöphorectomies the ultimate results being favourably spoken of.

The late Professor John Gamgee tried some years ago to reintroduce the operation into England as a routine one, but for some reason or other the attempt was not successful.

In the paper presented by M. Flocard to the notice of *La Société National d'Agriculture de France*, in January, 1898, this gentlememan gave as the result of his experience :

1. That in the year following the operation the animals, being kept under the same care and diet, produced an average of 1,300 to 1,400 litres of milk more than if they had not been spayed.

2. That the richness of the milk is considerably increased, particularly in butter making properties ; and in addition its flow remains constant, being no longer influenced by œstrum.

3. That the absence of the troubles attending parturition and pregnancy is an advantage to the town dairyman.

4. That the spayed cow fattens more quickly, the flesh being better in quality than that of the normal animal. The nett yield of meat, too, is about 5 to 6 per cent. higher in spayed cattle than in those which have been allowed to become pregnant in order to fatten them.

In the discussion which followed, several well known veterinary surgeons and agriculturists spoke highly of the results which they had observed after the operation.

Time of Operating.

Calves are operated upon when a few months old, and

heifers when it is finally decided that they are to be fattened instead of passing into the dairy herd. The ovaries are removed through the flank as described later on.

In milking cows, in order to get the full benefit of the prolonged lactation, the operation should be done when the animals are about 5, 6, or 7 years old, and at about five or six weeks after calving, this being generally acknowledged to be the time when a cow gives her maximum quantity. They are operated upon through the vagina.

Neither in heifers nor cows should the operation be performed at time of œstrum, as the generative organs are then in a very congested condition and uncontrollable hæmorrhage is apt to ensue.

Method of Preparation.

The animal to be operated upon should be kept without food for about twelve hours previously, as by this means cleanliness in operating is facilitated (especially for the vaginal method) the rectum being almost empty; if operating by the flank it is easier to find the ovaries, and there is less likelihood of the intestines being injured or herniated.

For the flank method in calves and heifers, as a general rule the only preparation made is to clip off a little of the hair on the seat of incision, and I am told by those who have large experience in operating, that it is exceedingly rare for bad sequelæ to follow; for the milking cow, however, if operated upon in this way the parts ought certainly to be thoroughly cleansed and scrubbed with some disinfectant, the hair being removed by shaving.

Calves are thrown down on the side, the hind legs being roped together and pulled well back, or three legs may be tied together and the upper hind leg drawn back.

Heifers may be thrown or done in the standing position, placed against a wall with bull-dogs on the nose and an assistant to help to keep the animal in position.

In operating by the vaginal method the tail and external genitals must be thoroughly cleansed with soap and hot water containing some disinfectant. The vagina is carefully syringed with some antiseptic which is made to come in contact as far as possible with every part of it. The plan I have adopted has been to pour into it as much as it would hold of a 4 or 5 per cent. solution of creolin in warm water and to let this stay inside for at least ten minutes; to remove this with aseptic cotton wool and apply the solution all round the interior, and afterwards to again wipe the vaginal walls with a solution of chinosol (1 in 500) In several cases some cocaine was added as a local anæsthetic to this latter solution with, I think, advantageous results.

It is hardly necessary to say that the operator's hands are thoroughly scrubbed and soaked in hot water containing disinfectant and that the instruments are boiled.

Flank Method of Operating.

For the removal through the side the left flank is usually chosen, although some operate on the right side in order to avoid adhesion afterwards between the rumen and the wound. The incision is made in the upper part of the flank, a little below and in front of the angle of the ilium, through the skin and muscles. The peritoneum is punctured with the fingers or by the aid of a director and scalpel, and the hand directed backwards into the pelvis underneath the rectum towards the ovaries. These organs are drawn towards the external orifice and removed either by scraping, ligature, torsion, or with the ecraseur. The peritoneum, muscles, and skin are then sutured, and the wound treated antiseptically; in calves I am told that it is rare for any further attention to be necessary.

Vaginal Method of Operating.

This is done whilst the animal is standing in the byre in her usual place, the bulldogs being held on the nose by one assistant whilst another pushes the animal against the side of the stall and holds the tail out of the operator's way. If the cow has a reputation for kicking a strap is twisted, figure of 8 fashion, round the hind legs, but I have not seen one attempt to kick up to the present. The operator then passes his hand containing the knife (which is of special pattern and has a guarded blade) into the vagina and makes a puncture about three-quarters of an inch, or an inch, directly above the os uteri, avoiding any large vessels which can be felt in the vicinity. This puncture should be made when the animal's back is straight, and if the cow persists in arching it this must be prevented by pinching across the loins or rubbing up and down the spine with a stick. The blade is then withdrawn and the knife dropped on the floor on the floor of the vagina. The wound is enlarged by the first, second, and third fingers until it will admit them or even the whole hand. The ovaries are found lying just inside, and feel very much like a couple of walnuts, one lying at the extremity of each horn of the uterus. Any difficulty in finding them can be got over by tracing up the individual horns of the uterus. Each one is seized between the fingers and separately drawn into the vagina, the ecraseur (which has a longer and thinner stem than the ordinary one used for castrating) being passed along the arm and the chain after being passed over the ovary is slowly tightened until the screw cannot be turned any more. It is held thus for from half a minute to a minute in order to allay all chance of hæmorrhage, the ovary being removed by the guillotine knife (in M. Flocard's pattern of écraseur) or with the thumb and finger. The chain is steadily slackened and the stump carefully released and allowed to fall back into the abdominal cavity.

After the other has been served in the same way the vagina is again wiped out with wadding which has been wrung out in antiseptic solution, and the operation is complete.

After Treatment.

This consists in keeping the patients quiet for a few days, occasionally sponging the vulva and tail with disinfectant solution. Unless something occurs to make it necessary the vagina itself should not be syringed or in any way interfered with. As a rule the animals commence to eat at once, the only signs of irritation being that the tail is elevated for a few hours. It is astonishing how very little pain is expressed during and after the operation. The flow of milk may fall off, although this is by no means a necessary sequel, for about three days, when it usually returns to the normal amount.

Accidents and Untoward Sequelæ.

The chief accident that might happen at the time would be the severing or cutting of the posterior aorta or one of the iliac arteries. This has been known to occur when the initial puncture in the vagina is made; particularly it is liable to happen if the knife used has not a sufficiently guarded blade and the cow is arching her back very much at the time. After such an accident it is useless to attempt treatment, the best plan being to convert the animal into meat at once.

Other accidents which have been observed are hæmorrhage from the ovarian arteries, abscess either on the vaginal wall or internally, peritonitis, and emphysema.

Hæmorrhage from the ovarian arteries is more apt to occur in old cows than in young ones, and on this account particular care must be taken to work the écraseur slowly, and not to remove the chain from half a minute to a minute after the instrument has been screwed up.

This accident is much more likely to occur if the patient is in œstrum at the time of operating.

The presence of an abscess is suspected by the animal shewing symptoms of colic and tympanitis, and can be discovered by rectal or vaginal exploration. The treatment advised is to endeavour to release the pus through the vagina by lancing the abscess after puncturing the vaginal wall (*Preci de Chirurgie Vétérinaire*, Vol. 1., page 698—Peuch and Toussaint), afterwards wiping the parts with wadding soaked in antiseptic solution.

Peritonitis.—This has been reported as being by no means an uncommon sequel when the flank method of operating upon milking cows was practised. With the vaginal method it is comparatively rare, and generally, if it occurs, is only local.

Symptoms are manifested about the 3rd, 4th, or 5th day, the animal losing her appetite and milk supply, and becoming dull and indifferent to her surroundings. The pulse and respirations are quickened, and the temperature is raised. The treatment is the usual one administered in cases of this kind. Prognosis must be very guarded.

Emphysema occasionally follows the flank incision, air extending under the skin even as far as the shoulders and neck. It is said, however, not to give rise to any disquieting symptoms, and to pass away without treatment.

Summary oe 56 Cases in England.

Of the 42 animals operated upon by M. Flocard, one shewed on the following day a little hurried respiration and colic, but after the application of mustard to the abdominal wall this soon passed off. None of the others seemed at all disturbed. In the 14 cases upon which I have operated, one five year old cow died about 56 hours afterwards of internal hæmorrhage, but the veterinary surgeon who made the post mortem could not positively trace it to the ovarian arteries, although I fear this must have been the origin. She was not noticed to be in œstrum at the time, and I can only surmise as the cause of the mishap that the écraseur may possibly have been removed a little too quickly. With the exception of a little coldness on two occasions in the regions of the loins the second day afterwards there were no indications of anything being amiss. In fact, she was feeding well and appeared quite normal when inspected about 10 o'clock in the evening, and death had occurred before 4 the next morning.

With this exception the general remarks of the owners have been that a few hours afterwards one could not tell that anything had been done to the animals.

Sufficient time has not yet elapsed to speak definitely of the prolongation of lactation, but so far as we can tell up to now the results are encouraging.

With regard to the putting on of flesh, there is a most decided improvement, and all the animals that were done with this object have become fit for the butcher in a much shorter time than those which have not been spayed. With those still milking the improvement in condition is also very noticeable. Mr. Kirby's opinion, after nine months careful observation, is that "they have certainly kept their average up better than usual, and fattened much quicker than they do as a rule. I consider that this is due to the operation. . . . . I believe the operation answers for men who carry on their business in the same manner as myself, *i.e.* to buy in fresh cows and sell them fat."

Conclusions.

For the excellent results obtained by M. Flocard, and from those of the 14 instances in which I have myself operated I am inclined to think, as far as one can judge from nine months experience, very favourably of the operation under certain circumstances. Had not the one death already alluded to occurred, I should have been very much more impressed with its value.

For dairymen in towns, those who buy the cows after having just calved and do not calve them down again, it is certainly likely to be of great value, even if the period of lactation is only prolonged to a steady, continuous flow of say 18 months. It must also be of service for the more fattening or cows that have aborted and are likely to do so again if put to the bull, for nymphomaniacs, for barren animals, those that have had milk fever and are thought to be predisposed to it, for cows too old to breed from, and for those affected with any disease (such as tuberculosis) in which the milk is unsafe but the meat perfectly fit for food.

Clearly, too, it seems a much better method of quietening the animal for fattening purposes than the one so commonly adopted of allowing pregnancy to take place. This would explain why there is a nett gain of actual meat in the spayed cow, as the whole of the nutritive material assimilated goes to form flesh instead of a considerable portion of it being required by the growing fœtus. In the calf and young heifer it is generally acknowledged that they become quieter and that fattening takes place much more rapidly.

Discussion.

Mr. McGavin: I think we are all very much indebted to Professor Hobday for the very excellent paper he has produced upon the spaying of cows. It is an operation practically that I know nothing at all about, and I think I am the wrong man to be called upon to speak. But in the absence of Professor Dewar, and as no other person seems to rise, I will say a few words on the subject. I think that the operation is a great help towards getting rid of tuberculosis in the herd. If an animal is suffering from tuberculosis and is cast aside and the operation of spaying performed upon that animal, she will fatten much quicker. Therefore you will get her away. She is a source of contamination to all the others, but you can put her into pounds, shillings, and pence, which is a very great thing to be considered in a stock, especially in the present depressed state of agriculture.

Colonel Steel: You would hardly have expected that I should volunteer to make any remarks on this subject, but for the purpose of eliciting further observations would you allow me to ask why the operation of ovariotomy has fallen into disuse during the last few years? I ask this question because I recollect when it was very common indeed. During my apprenticeship to Mr. Baker, of Essex, it was particularly common amongst pigs. I may, therefore, profess without any egotism to be rather an adept in ovariotomy, inasmuch as the first operations I ever performed were ovariotomy of pigs. Why is it that the operation has fallen into disuse? It would seem to argue that there must be some objection to the practice, although I merely bring forward this question hoping to elicit some reason for the operation having fallen into this state, and it therefore bears upon the question whether it is necessary to have the operation or not.

Mr. Lukes: I have not had much time to read Professor Hobday's paper, as it has only just come into my hands, but having had some experience in operating for ovariotomy in mares I did not know whether you might possibly like to hear the procedure we go through. I notice that Professor Hobday has rather a simple way of securing the animal. Our preparation for securing the mare is very elaborate. We have first of all a set of stocks built, and in the middle of our stocks we have a framework erected whereby we can put up a sling. We first of all put our animal in the stocks, put a sling under her belly and drive down a couple of pegs, one on each side of her, and put another sling over her back. back. Our idea is to keep her in as proper a position as we possibly can without letting her move at all. Then to a stake 15 or 20 feet high we attach a rope, which is attached to the hobble. We attach another rope on the

back of the animal to the same hobble, and we do the same thing on the other side. Our animal being thus secured cannot possibly move. In doing our operation we have to keep the animal perfectly still. I see that in cattle you do the operation about one inch above the os. In a mare we do it about one inch below the os. We make an ordinary little hole, just sufficient to get one finger in, and we dilate that with our hand, and rupture it until we can get our hand right in, and follow up the uterus until we come to the ovaries. I was talking to some gentlemen just now and they said there would be a great deal of trouble after the operation. I have done about 20 cases and I have never had the least trouble afterwards. I have never heard any of my friends say that they had any trouble afterwards, except that from 6 to 10 hours after the operation the animal will strain. On one occasion I got a little inflammation, that was all. Otherwise, the mare goes on all right and she does not seem to take half the notice of it a horse will do in the operation of castration. We do this operation in America more particularly on race mares. I see by the paper that Professor Hobday draws the ovaries back into the vagina. We cannot draw them back so far, and so we take off our ovary anterior to the vagina altogether.

Mr. HARVEY: There is one thing in Professor Hobday's paper which I should like to refer to. Alluding to the benefits of the operation he says in paragraph (2): "That the flesh is much better in quality than that of the cow which has not been spayed, (the flesh of the spayed cow even when old is said to be as palatable as that of the steer)." If that is so, I think the operation will commend itself to us apart from getting fees, because it is a great trouble to many country practitioners to get good beef to eat. We have to eat so much cow beef that if we could get this operation done it might give us better beef than we get now. There are one or two aspects of the question; the yield of meat is greater and the animals fatten quicker. If that is so, the operation should commend itself to practitioners. I hope the operation to be performed presently will turn out a success.

Col. STEEL: Will you allow me to ask the gentleman who spoke of the operation on mares, if there is the slightest suspicion of any deterioration in vigor? We credit the stallion with being degenerated to a certain extent by castration.

Mr. LUKES: From my experience I have found mares who have been operated upon increase in vigour rather than decrease. I have a mare of my own which I have had for nine years. I bought her at a very ridiculous figure because she was constantly in œstrum. You could not stop her on the street but what she would show "use." She was the first animal I ever operated upon. I operated upon her three months after I got her, more as an experiment than anything else, and this little mare will do 25 or 30 miles a day and keep very fat and in good condition all the time. I know another mare that has won nearly every race she has gone in for since she was operated on two years ago.

Principal WILLIAMS: When John Gamgee was in Edinburgh he introduced this operation and I have seen him perform it repeatedly. It was of course brought out first of all by M. Charlier of Paris, and the instruments were got from Charlier's. So far as I remember Gamgee performed the operation skillfully, but unfortunately—and I think that is one reason why the operation has fallen into disiavour—there were a great many deaths. Those that recovered improved in condition, and the increase of milk, judging from what I heard, was very great, and the animal continued milking for a very long time afterwards. If this operation were to become general, I can see the difficulty which the practitioner might have to face. He might be exceedingly succcessful in many cases, but there would be fatal cases, no matter how carefully or skilfully the operation was performed. The question is, whether the fee that could be afforded in payment of the operation would cover the risk of unsuccessful cases? I think, before the operation is ventured upon by practitioners, this question should be very carefully looked into. A young man going into a distrfct, no matter how skilful he might be, would suffer greatly in reputation from an unsuccessful case. I think we should approach this operation with very great caution.

Mr. KING: I can perhaps answer Colonel Steel's question as to why the operation of spaying heifers fell into disuse. I remember when I was quite a boy going about with my father spaying a good many heifers. Our mode of operation was to throw the animal on its side, remove the hair, and cut through the abdominal muscles and break through the peritoneum with the fluger. The first two or three fingers were introduced into the abdominal cavity and the ovaries brought up and removed, just snicked off with a knife. I never knew a case to die, and of course they were in the days when there were no antiseptic precautions. The operation was done in a very rough and ready way, and perhaps the hands were not always as clean as they ought to have been. The reason why farmers gave it up was that it was not thought of any practical value. They did not consider that the animals throve any better, or that the result compensated for the operation.

Prof. HOBDAY, in reply, said: There are one or two points of interest raised in the discussion. I do not anticipate there would be very much discussion on a paper of this kind, for the simple reason, as Colonel Steel says, that the operation has fallen largely into disuse in England. It used to be performed years ago, but for some reason or other it fell into disuse. I searched very carefully for the results of Professor John Gamgee's work, knowing that he had performed the operation, but I was unable to find the journals in which the accounts were recorded. It seems to me very strange that deaths should occur. It was disappointing to me that I got one death in the first 9 or 10 cases from secondary hæmorrhage. Frenchmen and others on the Continent record such marvellous results. M. Flocard, who has done about 5,000 cases, told me in a letter received early in June that during the past 22 years he had done 5,019 cases, and during his first 2000 he had only one-half per cent. of deaths. Since antiseptics have been in use he told me he had had 3,000 cases without a single mishap of any kind. A more brilliant result than that you could not find. One might reasonably be excused for casting a little doubt on these records, but M. Flocard has been over in England doing the operation, so that I think it is English veterinary surgeons took the matter up if it is going to be of benefit. The dairyman for whom M. Flocard has performed the operation, considers that when he has paid £1 a piece for it—and that is a larger figure than we should expect or hope to get—it has put into his pocket at least 15s. to £1 per head of cattle, judging from ten months experience.

With regard to the flesh being equal to that of the steer, I can speak from personal experience of it. Several of the cows in this herd were really old cows and the meat in each case has been stated by the butcher to be of the highest quality. I can only speak from six or eight cases, but so far as we have gone, the representations made by M. Flocard are verified, if they need verification from us. With regard to the remarks of Mr. King about the spaying of heifers, I was pleased to hear that he had noticed the operation was done without any deaths. I made special enquiries a little while ago among the veterinary surgeons of the eastern countries. Several of them still do it, and they told me that the animals were quieter and fattened quicker than when

they were not spayed. Of course, these were only individual opinions, but I think one can easily imagine that when the ovaries have been taken away in an animal which has arrived at the age of puberty it will fatten quicker than an animal who has ovaries.

ROYAL VETERINARY COLLEGE V.M.A.

The 277th ordinary general meeting was held on Friday, October 27th, 1899, at 6.30 p.m. Mr. C. Tyler occupied the chair. There were present Professor Hobday (president) Messrs. McIlvenna and Rix, M.R.C.V.S., and 38 members.

The minutes of the last meeting were read and confirmed.

A letter of good wishes from Mr. Trigger, F.R.C.V.S., the examiner of the essays was read.

Mr. C. CHALMERS exhibited the supernumerary spleen of a foal with a section under the microscope, the heart of a Dandie Dinmont shewing valvular vegetations; and an interesting photograph.

The PRESIDENT by the kindness of Mr. W. Robertson. M.R.C.V.S., Grahamstown, South Africa, showed the incisor teeth of a horse known to have been 49 years old when killed experimentally by horse-sickness virus; and by the kindness of Mr. Thos. Lepper, M.R.C.V.S., Aylesbury, two very fine kidney calculi from a hunter.

Mr. JOHN E. L. STILL delivered a very practical essay on "Care of the Mare and Foal, with Remarks on Breeding," the discussion being opened by Mr. H. G. Allen and well sustained by Messrs. Chalmers, Tyler, Webb, Sampson, Dixon, Aldred, Whitemore, Gillett, Child, Leaning, Verney, Collings, Sargeant, and Jethiji, it being found necessary to prolong the meeting for half an hour.

Hearty votes of thanks to the Essayist and Chairman brought the proceedings to a close.

JOHN HOBDAY, *Assist. Sec.*

LINCOLNSHIRE VETERINARY MEDICAL ASSOCIATION.

The autumn meeting was held at the Albion Hotel, Lincoln, on the 12th of October. The President of the Association, Mr. J. W. Gresswell, M.R.C.V.S., of Peterborough, presided, and the following, amongst other gentlemen, were present:—Messrs. T. Holmes, Bourne; R. W. Clarke, Wragby; C. E. Norgate, Retford; C. Hartley, and H. Howse, Lincoln; W. H. Brooks, Leadenham; and E. C. Russell, Grantham, the secretary.

The minutes of the last meeting, held at Peterborough, were taken as read and confirmed.

NEW MEMBER.

Mr. F. GRESHAM, M.R.C.V.S., of Newark, was nominated and unanimously elected a member of the Association.

NEW RULES.

The draft of the new rules for the government of the Society, in accordance with a resolution passed at the last meeting, was brought up for consideration. They were gone through seriatim, and were ordered to be adopted subject to the amendment suggested and carried.

LUMINOUS RADIANT HEAT:

ITS USE IN VETERINARY MEDICINE AND IN THE TRAINING AND CONDITIONING OF HORSES.

By F. HARTLEY, F.R.C.V.S.

Mr. HARTLEY said: The treatment of disease by heat was no new thing. At the present time, and for ages past, heat had been recognised as one of the most potent of our remedies. If a man or a horse fell sick, the first thing that was done was to see that he or it was kept warm. With human patients, perhaps, it was ordered that a fire should be lighted in their room, to keep them warm by favouring "heat-absorption." In the case of the animal an extra rug or two was put on, or in other words an endeavour was made to keep it warm by favouring "heat-retention."

So far as he knew the first serious attempt to systematise treatment by high temperature in the veterinary profession was about forty years ago, when the Turkish bath was introduced into England. Some instructive experiences had been recorded by J. E. Scriven, Esq., in his "Four Years' Experience of the Bath on an Irish Farm," published in Mr. Urquhart's excellent book on "The Turkish Bath," edited by Sir John Fife, M.D., F.R.C.S. Successful results seem to have been obtained in bronchitis, strangles, colic, dysentery, œdematous swellings, mange in horses and dogs, strains and rheumatism, particulars of which are given in many cases. There is also an interesting extract from *The Scottish Farmer* of September, 1862, giving the results obtained in Lord Kinnaird's bath at Mill Hill, in the treatment of pleuro-pneumonia. This is spoken of as effective, not only in "curing disease, but in warding it off and preserving health. It was, in fact, protective against exposure. A horse dealer is there mentioned, who on being asked if horses accustomed to the bath readily caught cold, replied that "there was not a single horse sheeted in the place, and the top halves of the stable doors are always off; the horses are always ready for work, and you would not hear a cough in the worst season. Whenever they are severely worked or exposed they are put into the bath and that sets them all right."

Speaking of his own personal experience, Mr. Scriven describes himself as "enjoying a new sense from the heat sent off in rays from a red hot stove." It reminded him of a practice of former years when studying engineering in Lancashire, when after a day's work he often went to the forge and exposed himself to the glowing heat of the air furnaces for half an hour, and he always found the stiffness and fatigue dispelled and so much vigour supplied that he often sought vent for it by throwing off his coat and taking to the hammer and anvil."

It would be noticed that great stress was here laid on the usefulness of "direct rays from a red hot stove. Now a red-hot stove was not quite a handy, safe, or even an effective way of supplying direct luminous radiation. Could it have been possible for these advanced men to have had at their disposal—as was the case to-day—substancss that could be incandesced by electricity, there is little doubt but that they would have availed themselves of the fact for the purpose in question.

Another point to be noticed from the foregoing extracts was the "necessity for a high temperature." The report already referred to in *The Scottish Farmer* distinctly says "the heat required in cases of pneumonia needs to be very great—up to 200 to 212—boiling point in fact. At a less temperature the curative effect was not visible.

Now it is well known that in order that such a heat may be borne, the heat must be *dry*. A vapour bath becomes painful at 115, and it is intolerable at 120. This brings us to the admitted drawbacks of the Turkish bath in actual work, namely, first, in a closed chamber, however dry the air may be to start with, free evaporation from the body soon charges it with moisture, in other words the atmosphere does not remain dry and consequently evaporation from the body is retarded, and it becomes incapable of bearing the high temperature, the conditions of which are approaching those of a vapour

bath. Secondly, in the Turkish bath it is necessary that the animal enter and breathe the heated and polluted air—air not only contaminated but also devoid of ozone—for ozone is *never present with the air above a certain temperature*, and it is this absence of ozone which to a great extent induces the lassitude often felt after a Turkish bath. These disadvantages which are so well known in the case of the human subject, are many times multiplied in the case of the horse, and so it has come to pass that an admittedly excellent treatment has fallen into almost complete disuse.

To obviate these disadvantages the apparatus has been devised that I am about to describe. It is a method of applying the direct rays of heat to the body without including the head, and at the same time securing absolute dryness of the air by automatic ventilation. The source of heat is direct luminous radiation, a heat which is more penetrative, more perfectly under control, more rapid in its action than that obtained by any other method, and it has the additional advantage that there being no combustion there is no contamination of the atmosphere. These points deserve the fullest and closest consideration, and must be left to those more eminently versed in physics. But at any rate, we all know that for curative purposes there is more than one way of using heat. It may be applied by direct conduction, that is, by the medium of some heated body such as hot air, hot water, hot sand bags, hot flannels, or it may be by means of direct radiation. Until quite recently all our heating arrangements for the purpose under discussion have been of the former kind, that is, effected by some medium, but it has been pointed out by Dr. Hedley that if direct radiant heat be employed no medium is necessary; even air may be dispensed with as radiant heat, like light, travels freely even through a vacuum. The air through which the radiation passes may be freezing, but the body upon which the heat falls nevertheless becomes warm. These heat rays may be either visible or invisible, or as physicists say "luminous or obscure." It is more than probable, indeed it is capable of proof that the luminous or chemical rays have certain therapeutic advantages over the heat rays alone. Every tissue of the body is permeable to light—skin, muscle, tendon and bone—and it is not difficult to prove that light influences the nervous system, the nutrition of the cell, and the composition of the blood. It will improve anæmic conditions and favourably influence nutrition; it will diminish pain in neuralgia, sciatica, lumbago, and is useful in rheumatism. (See "Heat and Light," by W. S. Hedley, M.D., *Electrical Review*, April 21st, 1899). Further, the bactericide power of light has long been recognised, and its localised action certainly cures lupus. (See "Photo-therapeutics," by Hedley, *Electrical Review*, September 29th, 1899). But these were points that he had neither the time nor the ability to discuss on that occasion. He would therefore leave this aspect of the question and consider the addition of light as a means of intensifying the heat.

Prof. Tyndall says, "If we wish to produce intense calorific effect by invisible rays, we must choose those emitted by an intensely luminous source," and he proves this by the following experiment:—he took a spiral of platinum wire and gradually heated it, and by means of lenses, prisms, and other suitable devices an "invisible spectrum" was obtained of the rays emitted by the platinum wire, and this was permitted to fall upon the face of a delicate instrument for measuring heat, the thermopile; thus the thermopile received and recorded the *invisible* rays alone. Now it was found that when the platinum spiral appeared dark the radiation of these invisible heat rays (the obscure band of the spectrum) was represented by 1, at a red heat by 18, and at a full white heat by 122. Thus we prove that as the new and more rapid vibrations (light) are introduced, the old vibrations (heat) become more intense.

This seems a good reason for using luminous heat. But there is another possible reason (still leaving out of consideration the physiological effect of light). There is a possibility, perhaps a probability, that the light rays, or at least a portion of them, when they impinge upon a solid substance are changed (or degenerated) into heat rays. At any rate it seems certain that—taking one effect alone, namely, diaphoresis, the latter is more rapid and profuse if the heat be produced from a luminous source. It must be remembered that the ordinary thermometer registers, not the direct reduction, but the temperature of the air. The air may be comparatively cold but the body upon which the direct luminous radiation falls becomes intensely hot, as a very simple experiment upon oneself will prove. The luminous rays from an electric source are more like the sun's rays—"the temperature in the sun." Obscure heat is, so to speak, the "temperature in the shade."

Mr. Hartley said that in the apparatus he was about to describe the same object, that of a luminous radiant heat might be obtained by gas, but there was no doubt that by far the best and most convenient and manageable source of obtaining high temperature with luminosity was to be found in the electric light. By its means heat could be obtained without combustion, and the many disadvantages in the way of air contamination, etc., were done away with. In this apparatus the heating arrangement consisted of luminous electric heaters fixed on reflecting surfaces of special construction, these surfaces being so arranged as to diffuse the reflected heat and light rays from the luminous source and project them in any given direction. The heat is under perfect control by means of a special regulator and can be increased or diminished in a moment. These heaters are inserted in the sides of what otherwise looks like an ordinary horse box with folding doors opening at both ends and secured by a cross-bar on the outside The horse is led in and the attendant steps out at the doors at its head closing them after him, the doors at the other end being closed at the same time. An asbestos lined rug is drawn over the top of the box falling well down all round. This rug being cut at the top end falls on each side of the horse's neck and is fastened by a light strap above and below. By this arrangement the body of the animal is in the bath for treatment, but the head being outside he freely breathes fresh air. The wooden shutters are drawn aside from the radiators, the current is turned on, and the heat and light at once become effective. The horse cannot see the light, he only feels the heat and usually likes it.

The thermometer may mark from 250 to 350 according to the case in hand. It is scarcely necessary to say that the temperature the animal will bear and the readiness with which diaphoresis may be produced vary in different animals within a very wide range. The looseness of the covering secures automatic ventilation, thus preventing the air from becoming saturated with moisture, which is a *sine qua non* where high temperature is to be endured, and although sweat may be abundantly produced it may only partly become visible for in such a high, dry temperature the greater part is vaporised immediately it is formed. There is a slide for observing all that goes on inside the box, and a thermometer so placed that it can be read on the outside.

Before giving his own experience Mr. Hartley referred to the results obtained in medical practice, where radiant heat treatment had for the past few years been rigidly on its trial. In looking through the literature of the subject he had been very much struck by some of the cases recorded. The "Therapeutics of Heat" formed the subject of discussion at the British Balneological Society on a recent occasion. It was stated that this treatment had been effective in every form of joint trouble, even of old standing; in most forms of neuritis;

in diseases of the organs of circulation, in cases of malnutrition where there was either circulatory or muscular weakness, in many of the dry forms of skin diseases, and in conditions even so wide apart as arthritis, bronchitis, and epilepsy. Indeed, high temperature treatment had proved effective in conditions so varied that one of the speakers referring to hot air said that "almost all conditions of disease are benefited by it, and if I have (at the hospital) a patient suffering from any complaint, who, after a few weeks of routine drug treatment, does not improve I at once order the hot air treatment and in most cases improvement, to a marked degree, very often shows itself.

Passing on to the radiant heat treatment the same gentleman stated that his recent experiences fully proved the fact that there were some special therapeutic properties in radiant heat, Another speaker pointed out that the Dowsing radiant heat both differed absolutely and entirely from the other methods of applying heat for remedial purposes, inasmuch as "in it you get—in addition to the heat—light and chemical rays."

Referring to the apparatus which he had just had completed for him Mr. Hartley said he could not speak with absolute confidence of its effects in general veterinary practice, for up to the present he had only used it in a very limited number of cases, but from the notes he had taken of these cases he should have no hesitation in saying that as suitable cases presented themselves he should submit them to this treatment. He had had no opportunity of trying the apparatus in certain of the more acute morbid conditions for which it would appear to be eminently well suited, but he hoped soon to be able to give reports of cases of congestion of the lungs, pneumonia, ordinary chills and other diseases of the respiratory and abdominal organs.

He was of opinion that the apparatus offered the best means yet brought forward of securing treatment by high temperatures, and he certainly considered that it was a means of improving a horse's condition by healthy sweating, without damaging the legs or exhausting the animal, and in this respect, if in no other, the luminous heat bath had a great future before it. He was certain that the treatment hardened the horse's legs, reduced the abdomen most distinctly, gave tone to the whole frame, and certainly a bloom to the coat. Apart from its strictly medical uses, he could not doubt that it would prove highly useful to owners and trainers of racehorses. He anticipated that the bath would prove of great service for horses when chilled or exhausted by extreme exertion such as one frequently finds after hunting, and in training centres when racehorses come off long railway journeys. A quick and thorough warming up would get rid of the congestion that is present and reduce to a minimum the chances of pneumonia and pleurisy that often supervene. Even nervous animals do not object to it, and he was fully satisfied that this bath, even in unskilled hands, could not do harm.

In conclusion, Mr. Hartley said as a general proposition it was doubtless true that the beneficial effect of luminous heat treatment was in proportion to the amount of skin surface acted upon. Therefore, as a rule it was best to use the box which he had described, but there were other cases that might be best dealt with by adding to it or by using separately a highly concentrated action localised upon some special point. This was effected by the "localiser." By its means a powerful radiation of heat and light could be projected upon any desired spot, and kept upon that spot by following any slight movement of the animal.

In reply to a few questions by members present, Mr. Hartley said the effect of the bath on exhausted horses was little short of miraculous. If the horse was very much exhausted he should certainly give it a slight stimulant before putting it in. The animals he had tried had certainly not disliked the bath, for however restive they had been on going in they had soon become quiet and restful, and the heat appeared to have a very soothing effect. He had had them put in when in a very wearied worn-out condition, and they had come out full of life and spirits. The usual length of the bath was thirty-five minutes, but this could be varied. There was no doubt that it renovated the nervous system. In cases of partial treatment there was no doubt that treatment by the localiser was far more convenient than damp and messy poultices, which were bad enough in the hands of the profession, but were often worse than useless when applied by an untrained person. When a well-groomed horse has been in the bath he comes out as if he had been dusted with bran, the dandruff coming off in large scales. He did not think the luminous heat bath would be any use in spavin, for they knew the old saying "Once a spavin always a spavin."

Mr. Hartley then invited the meeting to inspect the bath he had had built. On arriving at the Infirmary in Monks Road the visitors were shown into one of the buildings, at one side of which a substantial wooden structure had been erected sufficiently large to allow a horse to stand comfortably with a man at its side. There were double doors at the top and the bottom, as already described; there was no top, the sides being held together by half circular irons which were out of the way of the horse's head. Portions of the doors and sides were thickly padded so that it would be impossible for the most restive horse to injure itself. On either side there were four powerful electric lights in specially constructed tubes, at the back of which were brilliant reflectors, these lights were sunk into the wood work, and were protected from breakage by suitable iron bars. The switch board was on the opposite wall and was so arranged that all or any one of the lights could be turned on or off independently. Near to hung the "Localiser," somewhat in the shape of a wide-mouthed bell with a powerful electric lamp inside, and a handle at the back so that the heat and light could be moved in any direction.

Mr. Hartley had a horse led into the box, the asbestos lined rug was drawn over the box and fastened down the sides and round the horse's neck. On the animal being put in the temperature registered at 80, but the electricity had no sooner been turned on than it went up by leaps and bounds, and very soon 200 was registered. The horse never moved but seemed rather to like the sensation. Mr. Hartley very kindly explained the working of the different levers and buttons on the switch board.

A very hearty vote of thanks to Mr. Hartley for his paper and the pleasure he had given the members of the Association by allowing them to see the working of the bath, was carried unanimously.

The members aftewards dined at the Albion Hotel, when the usual loyal toasts were duly honoured.

E. C. RUSSELL, *Hon. Sec.*

Rabies in the Tuam Pack

Hunting men all over the kingdom will deeply sympathise with Mr. T. Lewin, of Castlegrove, Master of the Tuam Foxhounds, in the enforced loss of the whole of his beautiful pack. Such a calamity, coming at the very outset of the season, is all the more to be deplored. There is no positive proof how rabies first came to be introduced into the kennel, but a hound named Wild Rose was found to be suffering from it, and it is conjectured that she must have been bitten by some rabid dog when out hunting. Subsequently another hound was discovered to be suffering from the same cause, and, under the circumstances, the only sound, though most regrettable, policy was to have the entire pack destroyed.

EXTRACTS AND NOTES.

YEW TREE POISONING.

To the Editor of *The Times*.

Sir,—I have read with interest the letter of your correspondent, Mr. G. R. Ryder, as to the circumstances under which a four-year-old carthorse was supposed to be poisoned by the eating of a few sprays (12 to 20, three inches long) of yew. But I am very much puzzled and feel somewhat sceptical as to the "evidence" of poisoning, and am strongly inclined to think that there must have been some other, and unexplained, reason for the quite "sudden death" of the horse. The presence in the animal's stomach within a few minutes, apparently, after eating them of so small a quantity of yew leaves, which were found, on examination, to be undigested, could scarcely, I feel sure, account for the rapid tragedy.

There is much mystery surrounding the various accounts of yew leaves poisoning, but it has been generally believed that fresh yew leaves are innocuous, and there are many instances of animals—chiefly cows and sheep—eating these with impunity. But the eating of the dead leaves, or partially dry leaves, has been believed to be fatal.

Curiously enough, however, there has been little, I believe, of expert medical opinion on this subject, and it would be very interesting if some of the numerous and distinguished medical experts who read *The Times* would give their opinion on the matter.

Yew tree berries are, I believe, quite innocuous, and have been eaten frequently without harm by children.

On the other hand, amongst the curious facts of botanical science there is the one that, whilst the wholesome and excellent tuber of the potato is, as we all know, innocent of poisoning us, there is a deadly lethal character about the "apple" of that familiar vegetable. I have never tried the experiment on myself, either by eating yew berries or potato "apples."—I am, sir, yours very faithfully,

FRANCIS G. HEATH.

Underwood, Kew Gardens, Surrey.
October 19th.

GLASGOW VETERINARY COLLEGE.

The introductory address at this Institution was delivered on Friday, 20th October, by Professor Young, Glasgow University. Bailie S Chisholm, of Glasgow, presided, and he was supported by Principal McCall, his teaching staff, and many friends and well-wishers to the College.

Professor Young, in the course of his remarks, referred to the close bond of relationship which existed between the sister professions, which bond it was his earnest desire to find more and more firmly united with advancing years. He also referred to some of the most recent researches in connection with veterinary medicine, and from the facts elicited and the way the work had been accomplished he augured well for the future of our profession.

At the conclusion of a very interesting address, Bailie Chisholm, in a few well chosen words, proposed a hearty vote of thanks to Professor Young, which was carried with acclamation.

Prof. McCall then intimated the results of the examinations held during the previous session, and a vote of thanks to the Chairman terminated the meeting.

STOPPING A GLANDERED HORSE.

At the Lambeth Police Court, November 2nd, the London Horse and Carriage Repository (Limited), of New Kent Road, were summoned by the London County Council to answer the complaint that they, on or about September 18th, having in their charge at the Elephant and Castle Horse and Carriage Repository a horse affected with glanders, did not with all practicable speed give notice of the fact to the police.—Mr. John Collman, from the Solicitors' Department of the council, appeared in support of the summons.—Mr. George Stewart, the manager of the repository, answered the summons, and said he was prepared to accept the responsibility.—Mr. Collman said the horse forming the subject of the proceedings was announced for sale in the company's catalogue on September 18th, but was purchased privately on the morning of that day by a man named M'Donald for shipment abroad. M'Donald only made a cursory examination of the animal, and took it to Brunswick Wharf, Blackwall, pending its shipment. The next morning the horse was seen by Mr. A. C. Graham, an inspector in the service of the council, appointed under the Exportation of Horses Order. He saw what appeared to be several farcy buds on one of the legs of the horse, and communicated with Mr. H. K. Shaw, the Council's veterinary inspector, who formed the opinion that the horse was suffering from glanders, and that the outward symptoms must have been visible for some days, and, therefore, must have been visible at the time the horse was at the repository. The Council were making efforts to suppress glanders in London, and they felt that great vigilance should be used by those responsible for the management of horse repositories.—Evidence was called in support of the summons.—Mr. Stewart, in answer to the summons, stated that nothing wrong with the horse was detected at the repository, and pointed out that if the symptoms of glanders had been apparent they ought to have been seen by the purchaser, who was a man experienced in horses. He argued that the person really responsible was the vendor of the horse, who ought to have known of its condition.—Mr. Horace Smith imposed a penalty of £10, and £3 3s. costs.

The Dick Trust.

It is high time the Trusts with which Edinburgh is financially connected were thoroughly examined. It is desirable that the citizens generally should know how the Trusts are doing their work, and what is the indebtedness of the city in regard to each of them. In connection with the Common Good account, at Edinburgh Town Council on Oct. 31st, Councillor Waterston pointed out that the Dick Trust was thirteen thousand pounds to the bad. Why should it always be left to Mr. Waterston to rake up this matter? The position of the Trust and the city's relations to it are the business of the ratepayers, and the Town Council should see to it that some information on the subject is forthcoming. It is all very well for Treasurer Cranston to decline to discuss in public the position of the Trust, on the ground that he does not wish to say anything detrimental to the institution. But are not the interests of the ratepayers to be considered even before those of an institution on which the city is spending its funds? As the custodian of the city finances, Mr. Cranston is the proper man to make a move. If he will start an investigation, not only into the Dick Trust but into the other Trusts connected with the Corporation, it will be a capital beginning to his term of office.—*The Edinburgh Evening News.*

Cattle for Natal.

The Board of Agriculture has received a copy of an Act which provides that all cattle imported into the Colony of Natal must either be accompanied by a certificate signed by a duly qualified veterinary surgeon of the country from which the cattle have been despatched, to the effect that they have prior to embarkation been subjected to the tuberculin test and have thereby been proved to be free from tuberculosis; or be placed in quarantine on arrival and subjected to the tuberculin test at the expense of the owner. If the cattle are free from tuberculosis and from any other disease unfitting them for introduction into the Colony, they may be landed and forwarded to their destination. Animals affected with tuberculosis will be destroyed, unless the owner prefers to return or reship them, the carcase being disposed of as the owner may think fit, provided that the flesh be not considered unfit for food. The above provisions do not apply to cattle imported solely for slaughter.—*Morning Post.*

ARMY VETERINARY DEPARTMENT.

From *The London Gazette*:

War Office, Pall Mall, 31st Oct.

The undermentioned appointments are made to the Staff of the Lines of Communication in South Africa:—

Vet.-Lieut.-Colonel I. Matthews, Army Veterinary Department, to be Principal Veterinary Officer. Dated 9th October, 1899.

4th Division.

Vet.-Lieut. C. B. M. Harris, Army Veterinary Department, to be Veterinary Surgeon. Dated 9th October, 1899.

Lieut.-Colonel C. Clayton has been appointed district veterinary officer on the staff of Lieut.-General Kelly-Kenny, C.B., commanding the Aldershot district in the absence of Sir R. Buller.—*The Times.*

"Pink-eye" has broken out amongst the horses of the Scots Greys stationed at Edinburgh. The disease is of a mild type, and the number of horses affected is not, so far, very large; but as the regiment, like so many others, is under orders for the Cape, the outbreak, to say the least of it, is not very opportune. The disease is believed to have been introduced by horses sent recently from York, to take the place of those cast as unfit for active service against the Boers. The disease is also said to be rather prevalent in Ayrshire, and it is known that some prominent breeders have sustained serious losses through this cause.—*The North British Agriculturist.*

CORRESPONDENCE

PROFESSIONAL CONDUCT.

Sir,

I was very pleased to see so many replies to my article on "Professional Conduct" in last week's *Veterinary Record*, because I think that it really is a question that should be thrashed out in our journals.

We are all agreed, I think, that a young man starting has to make a living, and requires some return for the money he has laid out in obtaining his diploma, and I also think that everyone has a vague idea that some professional etiquette is required of him in his struggle for existence, but how many could tell you how far this professional etiquette goes, and how many act up to what their consciences prompt them is etiquette?

Were one simply to put up a plate on one's front door and wait for clients one might wait for years, but the young practitioner cannot afford to let his best years go by, so what does he do? He resorts to strategy, and buying a horse and trap (if he can afford it) he drives to fictitious cases in a hurry so as to be "seen about," but this does not bring in clients, so he tries another way, he goes into a public-house and stands drinks to grooms and coachmen, and asks them for their masters' work on so much per cent. commission. It is no use us trying to hide the fact that this is, though not general, at least too common in our profession, and however much we soothe our consciences by saying "Well, one must live," still we know that it is not the best way to raise our social status. We cannot compare ourselves with doctors nor do I wish to, we are quite a distinct race.

Personally, when I started I could not, nor can I yet, bring myself to this style of business, but as I explained last week my method is what I conscientiously consider to be within the bounds of professional etiquette. I have done my best to make myself known without advertising in the papers. I have never offered any bribes to or tried with reduced fees to induce stock owners to employ me, and my fees never vary except to poor clients; but I confess I have called on farmers in the country and asked them if they wanted my professional services, and when told that they already employed another man I have always recommended them not to change.

Whether my method or the underhand method of bribes and treats to coachmen is the better I leave to the Registration Committeee to decide, but I have my own opinion, and I fail to see how any right-thinking person can think differently. At any rate this is the only method I can see left to me to obtain clients; but it is not a pleasant one, and I really think that "Nemo's" suggestion of a small paragraph in the papers and circulars to stockowners would be preferable, and I fail to see how, if not abused, it can hurt the status of the profession.

Returning to Mr. Blakeway's original charge, does he not lay himself open to the thought (merely a thought, of course) that he has not sufficient confidence in own abilities, or why, if he gives every satisfaction, should his clients cease to employ him however tempted. I thank him for the explanation of his advertisement, and now let me explain mine. I had no idea that the Kreochyle Co. were going to copy a quotation from my article on "Canine Influenza" into their advertisement and it came as a great surprise to me, but I did not think it necessary to ask them to discontinue it as I see many older practitioners sending testimonials to various patents and drugs, evidently written especially for them, and with their full name and address.—Yours truly,

H. Karslake Tasker.

Sir,

A case is not progressing satisfactorily. A client of one veterinary surgeon, ignorant of professional ethics, calls in another veterinary surgeon to see the case. The second veterinary surgeon finds fault with the first veterinary surgeon's treatment and prevails upon a gullible individual to believe that (although it is not actually said) the first veterinary surgeon is negligent and has neglected some, to his mind, very important detail of treatment.

The simple and undiscerning client asks the second veterinary surgeon to take up the case. He does so and never either sees the first veterinary surgeon about the case nor mentions it to him. The patient probably dies and then although the case may have been treated for three or four months by the second veterinary surgeon, he still puts the death down to the first veterinary surgeon's treatment, and cautiously but conclusively makes the credulous horseowner believe so.

Three errors of etiquette seem to be committed here. When a second veterinary surgeon makes any statements about the treatment of a case, he ought to do so with the first veterinary surgeon present. He ought to support any diagnostic statement he may dogmatically make by post-mortem proof. The second veterinary surgeon ought to allow (if he treats the case two or three months after the first veterinary surgeon has already treated it, say, another month) that possibly his own diagnosis is wrong, or that his medicine may be contra-indicated and contribute to the inevitable demise. At any rate veterinary surgeon No. 1 is in these cases quite as good as No. 2.

Yours sincerely,

TYPICAL INSTANCE.

Sir,

Re Mr. Tasker's letter in *The Veterinary Record* of October 21st. Mr. Tasker says that he has endeavoured to study "Veterinary professional etiquette," if this is so, why does he not act up to it? I fail to see where etiquette comes in when Mr. Tasker admits that he drives from one place to another asking for work, placing himself on an equal with a commercial traveller trading in groceries, or a pork butcher in sausages; but Mr. Tasker does'nt mind that. By the high stepping manner in which Mr. Tasker writes, one would think that his is the only practice in Sussex, but there are other Veterinary Surgeons existing who are quite as competent as Mr. Tasker, and perhaps more so, who do *not* tout for work. Notice Mr. Tasker's 15 miles circuit.

It is wise not to absorb all we read in some cases. I hope Mr. Tasker won't cause veterinary surgeons to become extinct in Sussex, or I certainly shall not call that etiquette. Mr. Tasker's invitation to veterinary surgeons to try and get his clients, to my way of thinking reads and sounds very empty, but perhaps Mr. Tasker thinks that "exchange is no robbery," as he tries to get theirs. It behoves every one to act up to what they preach, so if Mr. Tasker endeavours to study Veterinary Etiquette, why does he have his name stuck up in the yard of a little country pub. in the midst of other practitioners' practices, without informing those gentlemen of the fact that he intended doing so?

I shall not allow Mr. Tasker to teach me the treatment he hath set forth for canine influenza if he goes on like this.—Yours faithfully.

ETIQUETTE.

VETERINARY OFFICERS IN ACTION.

Sir,

With reference to your leader in the issue of October 28th commenting on the capture of Veterinary-Lieut. Shore, A.V.D., by the Boers, permit me to point out that under the terms of the Geneva Convention, to which the Transvaal is a subscribing party, medical officers, in the discharge of their duties, are protected, and that the members of the Royal Army Medical Corps left behind at Dundee with the wounded, according to the rules of International Law, will be permitted to rejoin the British Forces unmolested. The veterinary officer, although in the discharge of his duties, receives no such protection and is liable to be made a prisoner in the same way as a combatant. The argument is that horses are contraband of war and war material, but surely soldiers are more so, and the veterinary officer is acting as much from motives of humanity as his medical brother officer is. It would therefore appear, according to the ruling of the War Office, that in times of peace their officers are non-combatants and unworthy of military titles and subject to certain disabilities. In time of war they are treated as combatants in regard to the matter of capture by the enemy, plus the disabilities of being non-combatants.

M.R.C.V.S.

MR. BECKTON'S PUPILS.

Sir,

A club has been formed of the old students of Mr. Beckton, the well-known preliminary Medical Coach. Its object is to give his former pupils an opportunity of meeting at least once a year at the annual dinner (which it is proposed to hold in London) and thereby maintain or renew friendships first begun whilst working with him.

Already the scheme has been enthusiastically received in influential quarters, and promises to be well supported. We trust that you will, through the medium of your columns, give it publicity, and thereby bring it under the notice of those past or present students among your readers who were former pupils of Mr. Beckton. To these, full particulars will be given and a hearty welcome accorded by—Yours truly,

H. A. GLOVER.

61 Torrington Square, London.

"STABLE AND KENNEL."

Dear Sir,

I received one of the ridiculous circulars from the Editor of *The Stable & Kennel* and the impression it at once gave me was that he (the Editor) was merely testing what proportion of our members would lower themselves to be placed on his list, when he would be in a position to ridicule our profession should he succeed in getting a sufficient number of names.

I hope that other members adopted the same plan as I did, viz., consigned it to the waste paper basket where all such rubbish should go. Thank goodness we can get a respectable living without the assistance of such a man, whom we should treat with contempt, knowing as we should that he could do us no harm by recommending men who would lower themselves to this degree.—Faithfully yours,

ARTHUR GILL.

IRISH CENTRAL V.A.

Dear Sir,

In to-day's *Record* I notice an account given of the Irish Central Veterinary Association meeting, held in Hayden's Hotel on 3rd October. 1899, which to my mind is a most erroneous report, as some of those who spoke, including myself, are credited with having given utterance to most perfect twaddle. According to the discussion reported, not a single one appears to have been able to express himself, in fact did not know what he was talking about, now in fairness to those present I would ask you to be good enough to state in next issue, that the whole discussion has been very badly reported indeed, and as shewing the reporter has been at fault you will observe the only part correctly stated was the essayist's paper, which I presume must have been handed over after reading, or even that might have suffered distortion.

Yours faithfully,

W. CARGILL PATRICK.

Ballinasloe, 28th Oct.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. A. Gill, H. A. Glover, W. C. Patrick, J. McCall. Prof. G. Galeotti. "Etiquette," "M.R.C.V.S." "Verbatim," "Typical Instance."

Report on Surra, Vol. II. Parts I. & II., by A. Lingard; *The Edinburgh Evening News*.

We shall be obliged by early intelligence of all matters worth bringing under the notice of the profession, and thankful to any friends who may send us cuttings from local papers containing facts of interest